

Applicant: Shiu-Ko Jangjian, et al.

Serial No.: 10/761,654

Attorney Docket No.: 67,200-1200

IN THE CLAIMS

Please amend claims 1, 9 and 13 as follows.

1. (Currently amended) A method of cleaning a process chamber, comprising the steps of:

providing a gas mixture comprising nitrous oxide and nitrogen trifluoride in a nitrous oxide:nitrogen trifluoride volume ratio of at least about 0.2;

maintaining a temperature of from about 65°C to about 300°C in said process chamber;

introducing said gas mixture into the process chamber;

and

generating a plasma from said gas mixture.

2. (Original) The method of claim 1 further comprising the step of providing an inert carrier gas in said gas mixture.

3. (Original) The method of claim 1 wherein said nitrous oxide:nitrogen trifluoride volume ratio is from at least about 0.2 to about 0.8.

4. (Original) The method of claim 3 further comprising the step of providing an inert carrier gas in said gas mixture.

5. (Original) The method of claim 2 wherein said inert carrier gas comprises argon.

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6. (Original) The method of claim 5 wherein said nitrous oxide:nitrogen trifluoride volume ratio is from at least about 0.2 to about 0.8.

7. (Original) The method of claim 2 wherein said inert carrier gas comprises helium.

8. (Original) The method of claim 7 wherein said nitrous oxide:nitrogen trifluoride volume ratio is from at least about 0.2 to about 0.8.

9. (Currently amended) A method of cleaning a process chamber, comprising the steps of:

providing a gas mixture comprising nitrous oxide and nitrogen trifluoride in a nitrous oxide:nitrogen trifluoride volume ratio of at least about 0.8;

introducing said gas mixture into the process chamber;
and

generating a plasma from said gas mixture using a radio frequency power of from about 1 watt/cm² to about 20 watts/cm².

10. (Original) The method of claim 9 further comprising the step of providing an inert carrier gas in said gas mixture.

11. (Original) The method of claim 10 wherein said inert

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carrier gas comprises argon.

12. (Original) The method of claim 10 wherein said inert carrier gas comprises helium.

13. (Currently amended) A method of expediting cleaning of a process chamber using nitrogen trifluoride, comprising the steps of:

forming a gas mixture by adding nitrous oxide to the nitrogen trifluoride in a nitrous oxide:nitrogen trifluoride volume ratio of at least about 0.2;

maintaining a temperature of from about 65°C to about 300°C in said process chamber;

introducing said gas mixture into the process chamber;

and

forming nitric oxide radicals and fluoride radicals in the process chamber by generating a plasma from said gas mixture using a radio frequency power of from about 1 watt/cm² to about 20 watts/cm².

14. (Original) The method of claim 13 further comprising the step of providing an inert carrier gas in said gas mixture.

15. (Original) The method of claim 13 wherein said nitrous oxide:nitrogen trifluoride volume ratio is from at least about 0.2 to about 0.8.

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16. (Original) The method of claim 15 further comprising the step of providing an inert carrier gas in said gas mixture.

17. (Original) The method of claim 13 wherein said nitrous oxide:nitrogen trifluoride volume ratio is at least about 0.8.

18. (Original) The method of claim 17 further comprising the step of providing an inert carrier gas in said gas mixture.

19. (Original) The method of claim 18 wherein said inert carrier gas comprises argon.

20. (Original) The method of claim 18 wherein said inert carrier gas comprises helium.